

## **Contribution of Zia Uddin, PhD in Perinatal Care and Neonatal Screening**

In **1977**, I gave my first lecture at the Pediatric Section, South Macomb Hospital, Warren, MI on Tay-Sachs disease (accumulation of G2 gangliosides due to hexoseaminidase A deficiency).

In **1978**, I introduced the concept of “Perinatal Care and Neonatal Screening” on a national basis. An interdisciplinary conference was organized [**Clin Chem 1978; 25 (7)**] by me at my own initiative in 1978 without any advice and monetary help at South Macomb Hospital, Warren, MI (now part of Ascension Health).

Speakers and their topics were: Professor Joseph Bieniarz, MD, “Amniocentesis in Perspective: Diagnostic Value of Ultrasonography and Protocol for Monitoring High Risk Pregnancy.” Professor Keith H. Marks, MD, “Elective Delivery of the term fetus: An Obstetrical Hazard.” Professor John L. Kitzmiller, MD, “Management and Outcome of Pregnancy in Diabetes Mellitus.” Professor Norman F. Gant, MD, “Supine Hypertension Test and the Clinical Management of Pregnancy-Induced Hypertension.” Professor Thomas P. Foley, MD, “Neonatal Screening for Congenital Hypothyroidism and Clinical Treatment.” Professor Samuel Meites, PhD, “Clinical Laboratory in Neonatology.” Mrs Ann Bennett (Department of Health & Human Services, State of Michigan, Lansing, MI), “Public Health and Neonatal Screening.”

In subsequent years, I was instrumental in the passing of the legislation in the State of Michigan for the neonatal screening of newborns. Today, neonates are screened for >75 genetic disorders. A book edited by me was launched in 2013 on “Diagnostic Hemoglobinopathy, Laboratory Methods and Case Studies,” and a chapter was written by me in this book on “Neonatal Screening for Hemoglobinopathies.”

In **1977**, I introduced the concept of research as an integral part of the training of the medical residents. My first resident did research on “OD at 650 nm for fetal lung maturity” and got the first prize at the South Macomb Hospital resident research presentations. Obstetricians and the residents were involved in several research projects directed by me, e.g.

Decreased laboratory testing for lecithin/sphingomyelin ratio and phosphatidylglycerol after fetal lung maturity assessment from lamellar body count in amniotic fluid.  
J Am Osteopath Assoc 2002; 102: 423-428

Troponin I in the Diagnosis of Acute Myocardial Infarction during Pregnancy, Labor and Postpartum.  
Am J Obstet Gynecol 2002; 187: 1719

Gestational age specific predicted risk of neonatal respiratory distress syndrome using lamellar body count and lecithin/sphingomyelin ratio in amniotic fluid.  
Am J Obstet Gynecol 2005; 193: 1688-92

Several lectures were given by me and the following two posters were presented for the management of gestational diabetes by monitoring glucose levels at the point-of-care.

Quality Management in Point-of-Care Glucose Testing, POCT Internet Platform.  
Zia Uddin, et al. Clin Chem 2000; 46(6): *Suppl*, p47, Abstract 22

Telehealth and glucose monitoring at patient's residence./  
Permanent # B-387, Annual Meeting of AACC, July 2015, Atlanta, GA

The concept of Internet based glucose monitoring at the residence of the patient and the daily computer analysis of the data at the office of the obstetrician was presented by me in 2013 at the annual meeting of the Institute of Electronics and Electrical Engineers (IEEE), Dearborn, MI. In view of my research work, and gratis education of the physicians, I was bestowed with a "Humanitarian Award" by IEEE.

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